Dray Tek

Vigor2760 Series

High Speed VDSL2 Router



Vigor2760 Series High Speed VDSL2 Router Quick Start Guide

Version: 1.0

Firmware Version:1.0.0_RC12b

(For future update, contact DrayTek)

Date: 21/11/2012

Copyright Information

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Safety Instructions and Approval

Safety Instructions

- Read the installation guide thoroughly before you set up the router.
- The router is a complicated electronic unit that may be repaired only be authorized and qualified personnel. Do not try to open or repair the router yourself.
- Do not place the router in a damp or humid place, e.g. a bathroom.
- Do not stack the routers.
- The router should be used in a sheltered area, within a temperature range of +5 to +40 Celsius.
- Do not expose the router to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.
- Do not deploy the cable for LAN connection outdoor to prevent electronic shock hazards.
- Keep the package out of reach of children.
- When you want to dispose of the router, please follow local regulations on conservation of the environment.

Warranty

We warrant to the original end user (purchaser) that the router will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from the dealer. Please keep your purchase receipt in a safe place as it serves as proof of date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, we will, at our discretion, repair or replace the defective products or components, without charge for either parts or labor, to whatever extent we deem necessary tore-store the product to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be offered solely at our discretion. This warranty will not apply if the product is modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions. The warranty does not cover the bundled or licensed software of other vendors. Defects which do not significantly affect the usability of the product will not be covered by the warranty. We reserve the right to revise the manual and online documentation and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

Be a Registered Owner

Firmware & Tools Updates

Web registration is preferred. You can register your Vigor router via http://www.draytek.com.

Due to the continuous evolution of DrayTek technology, all routers will be regularly upgraded. Please consult the DrayTek web site for more information on newest firmware, tools and documents.

http://www.draytek.com



European Community Declarations

Manufacturer: DrayTek Corp.

Address: No. 26, Fu Shing Road, HuKou Township, HsinChu Industrial Park, Hsin-Chu, Taiwan

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Product: Vigor2760 Series Router

DrayTek Corp. declares that Vigor2760 Series of routers are in compliance with the following essential requirements and other relevant provisions of R&TTE Directive 1999/5/EEC.

The product conforms to the requirements of Electro-Magnetic Compatibility (EMC) Directive 2004/108/EC by complying with the requirements set forth in EN55022/Class B and EN55024/Class B.

The product conforms to the requirements of Low Voltage (LVD) Directive 2006/95/EC by complying with the requirements set forth in EN60950-1.

Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device may accept any interference received, including interference that may cause undesired operation.

RF Exposure Warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

Caution

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

Please visit http://www.draytek.com/user/SupportDLRTTECE.php#



This product is designed for POTS, DSL, 2.4GHz WLAN network throughout the EC region and Switzerland with restrictions in France. Please see the user manual for the applicable networks on your product.



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1. Introduction

The Vigor2760 series are the routers with high speed in data transmission through DSL port and LAN ports.

With the development of NGN (Next Generation Network), you may recently hear the news about FTTx deployment in your local area or even have already subscribed the unbundling last mile service (e.g. VDSL2) from local ITSP for FTTx. As adopting FTTx, the main question for end users is whether your legacy router could fully utilize its bandwidth or not.

DrayTek launches Vigor2760 series – High speed router, perfectly complied with VDSL2 environment including Vigor2760, Vigor2760n and Vigor2760Vn for speed-wanted customers. With high throughput performance and secured broadband connectivity provided by Vigor2760 series, you can simultaneously engage these bandwidth-intensive applications, such as high-definition video streaming, online gaming, and Internet telephony / access.



Vigor2760 supports up to 2 VPN tunnels using advanced protocols such as IPSec/PPTP (for remote dial-in only) with AES/3DES for encryption and MD5/SHA-1 for authentication.

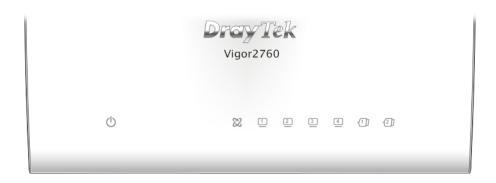
Vigor2760 'n' models comply with 802.11n standards. They support WEP/WPA/WPA2 encryption and MAC Address Control.

Vigor2760 'V' models provide two analogue phone connectors. It supports multiple SIP registrars with high flexible configuration and call handing options.

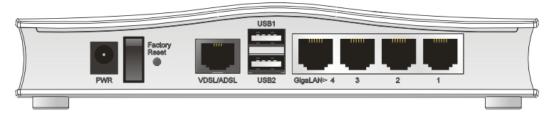
In addition, Vigor2760 series supports two USB interfaces for connecting USB printer to share the printer or USB storage device for sharing files and 3G backup services.

1.1 Panel Explanation

1.1.1 For Vigor2760

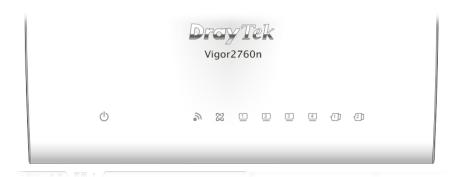


LED	Status	Explanation
()	Blinking	The router is powered on and running normally.
(ACT)	Off	The router is powered off.
247	On	The DSL port is connected.
DSL (Green)	Blinking (Slowly)	The router is ready.
	Blinking (Quickly)	The connection is training.
1 4	On	The port is connected.
LAN1/2/3/4 (Green)	Blinking (Green)	The data is transmitting.
1] 2]	On	A USB device is connected and active.
USB1/2		

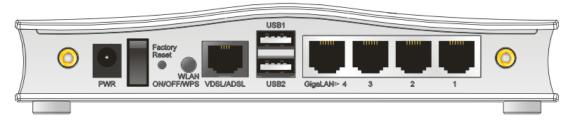


Interface	Description
PWR	Connector for a power adapter.
I/O	Power switch.
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.
VDSL/ADSL	Connector for accessing the Internet.
USB (1-2)	Connector for USB storage device or printer or 3G
	backup.
LAN (1-4)	Connectors for local network devices.

1.1.2 For Vigor2760n



LED	Status	Explanation
(h)	Blinking	The router is powered on and running normally.
(ACT)	Off	The router is powered off.
5	On (Green)	The wireless access point is ready.
(Wireless LAN	Blinking (Green)	The data is transmitting via wireless connection.
On/Off/WPS)	Blinking	Blinks with one second cycle for two
	(Orange)	minutes. The WPS function is active.
	Off	The wireless access point is turned off.
72	On	The DSL port is connected.
DSL (Green)	Blinking (Slowly)	The router is ready.
, ,	Blinking	The router is trying to connect to
	(Quickly)	Internet.
1 4	On	The port is connected.
	Blinking	The data is transmitting.
LAN1/2/3/4		
1]~2]	On	A USB device is connected and active.
USB1/2		

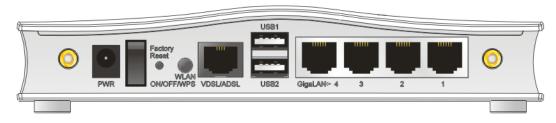


Interface	Description	
PWR	Connector for a power adapter.	
I / O	Power switch.	
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.	
WLAN ON/OFF/WPS	WLAN WPS - Press this button for 2 seconds to wait for client device making network connection through WPS. When the LED lights up, the WPS connection will be on. WLAN ON/OFF - Press the button once to enable (WLAN LED on) or disable (WLAN LED off) wireless connection.	
VDSL/ADSL	Connector for accessing the Internet.	
USB (1-2)	Connector for USB storage device or printer or 3G backup.	
LAN (1-4)	Connectors for local network devices.	

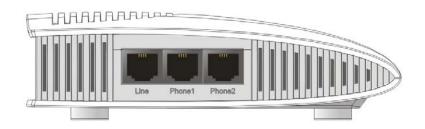
1.1.3 For Vigor2760Vn



LED	Status	Explanation
	Blinking	The router is powered on and running
(ACT)		normally.
(ACT)	Off	The router is powered off.
_	On	A PSTN phone call comes (in and out).
€ ⇒		However, when the phone call is
(LINE)		disconnected, the LED will be off for
	Off	awhile.
		There is no PSTN phone call.
61 62	On	The phone connected to this port is off-hook.
(Phone1/Phone2)	Off	The phone connected to this port is
		on-hook.
_	Blinking	A phone call comes.
3	On (Green)	The wireless access point is ready.
•11	Blinking	The data is transmitting via wireless
(Wireless LAN	(Green)	connection.
On/Off/WPS)	Blinking	Blinks with one second cycle for two
	(Orange)	minutes. The WPS function is active.
	Off	The wireless access point is turned off.
22	On	The DSL port is connected.
66	Blinking	The router is ready.
DSL (Green)	(Slowly)	
	Blinking	The router is trying to connect to
	(Quickly)	Internet.
1 4	On	The port is connected.
<u> </u>	Blinking	The data is transmitting.
LAN1/2/3/4		
1 2	On	A USB device is connected and active.
USB1/2		



Interface	Description	
PWR	Connector for a power adapter.	
I / O	Power switch.	
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.	
WLAN ON/OFF/WPS	WLAN WPS - Press this button for 2 seconds to wait for client device making network connection through WPS. When the LED lights up, the WPS connection will be on. WLAN ON/OFF - Press the button once to enable (WLAN LED on) or disable (WLAN LED off) wireless connection.	
VDSL/ADSL	Connector for accessing the Internet.	
USB (1-2)	Connector for USB storage device or printer or 3G backup.	
LAN (1-4)	Connectors for local network devices.	

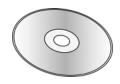


Interface	Description
Line	Connector for PSTN life line.
Phone1/Phone2	Connector of analog phone for VoIP communication.

1.2 Package Content



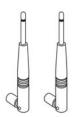
Quick Start Guide



2 CD

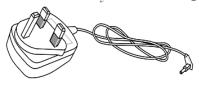


3 RJ-45 Cable (Ethernet)



4 Antenna (n models)

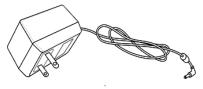
5 The type of the power adapter depends on the country that the router will be installed. * The maximum power consumption is *17-23 Watt*.



UK-type Power Adapter



EU-type Power Adapter



USA/Taiwan-type Power Adapter



AU/NZ-type Power Adapter

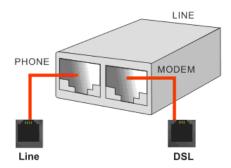
2. Installing Your Router

This section will guide you to install the router through hardware connection and configure the router's settings through web browser.

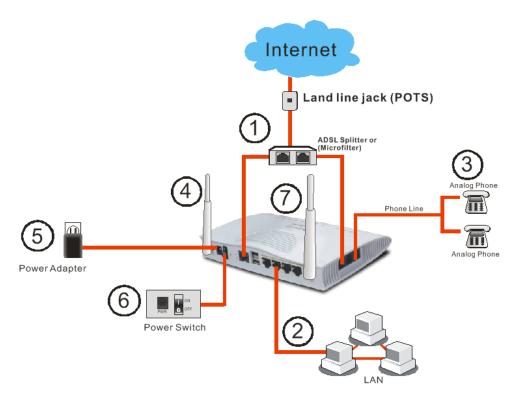
2.1 Hardware Installation

Before starting to configure the router, you have to connect your devices correctly. (For the hardware connection, we take "*Vn*" model as an example.)

1. Connect the XDSL interface to the external XDSL splitter with an XDSL line cable for all models. For Vigor2760Vn, also connect Line interface to external XDSL splitter.



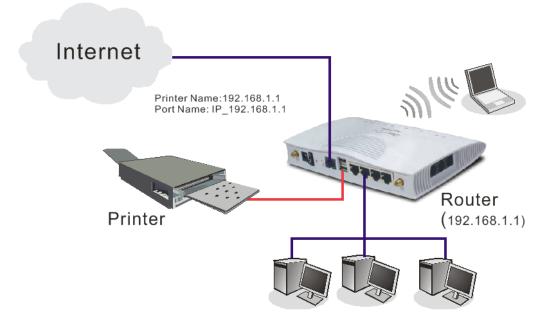
- 2. Connect one port of 4-port switch to your computer with a RJ-45 cable. This device allows you to connect 4 PCs directly.
- 3. Connect Phone port to a conventional analog telephone (for V model only).
- 4. Connect detachable antennas to the router for Vigor2760 series (for n model only).
- 5. Connect one end of the power cord to the power port of this device. Connect the other end to the wall outlet of electricity.
- 6. Power on the router.
- 7. Check the **ACT** and **DSL**, **LAN** LEDs to assure network connection.



(For the detailed information of LED status, please refer to section 1.1.)

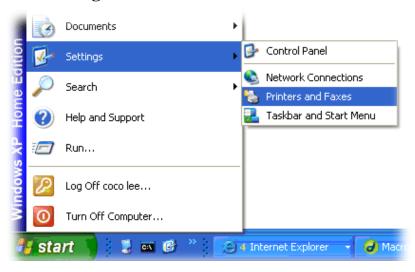
2.2 Printer Installation

You can install a printer onto the router for sharing printing. All the PCs connected this router can print documents via the router. The example provided here is made based on Windows XP/2000. For Windows 98/SE/Vista, please visit www.draytek.com.



Before using it, please follow the steps below to configure settings for connected computers (or wireless clients).

- 1. Connect the printer with the router through USB port.
- 2. Open Start->Settings-> Printer and Faxes.



Open **File->Add a New Computer**. A welcome dialog will appear. Please click Next.



Click Local printer attached to this computer and click Next.

Server Properties Set Up Faxing

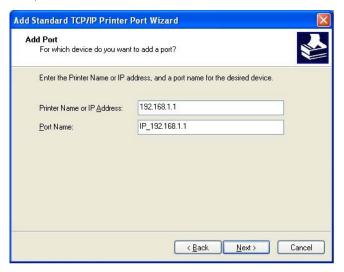
Close



In this dialog, choose Create a new port Type of port and use the drop down list to select **Standard TCP/IP Port**. Click **Next**.



6. In the following dialog, type **192.168.1.1** (router's LAN IP) in the field of **Printer Name or IP Address** and type **IP_192.168.1.1** as the port name. Then, click **Next**.



7. Click Standard and choose Generic Network Card.



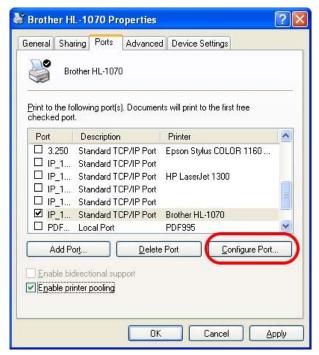
8. Then, in the following dialog, click **Finish**.



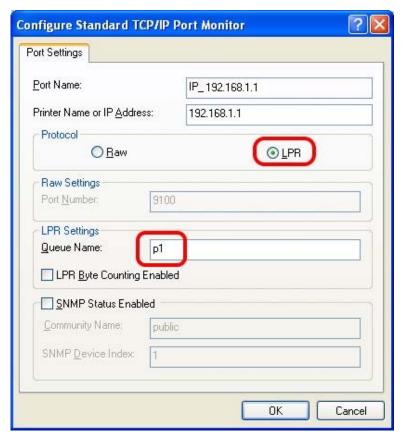
9. Now, your system will ask you to choose right name of the printer that you installed onto the router. Such step can make correct driver loaded onto your PC. When you finish the selection, click **Next**.



10. For the final stage, you need to go back to **Control Panel-> Printers** and edit the property of the new printer you have added.

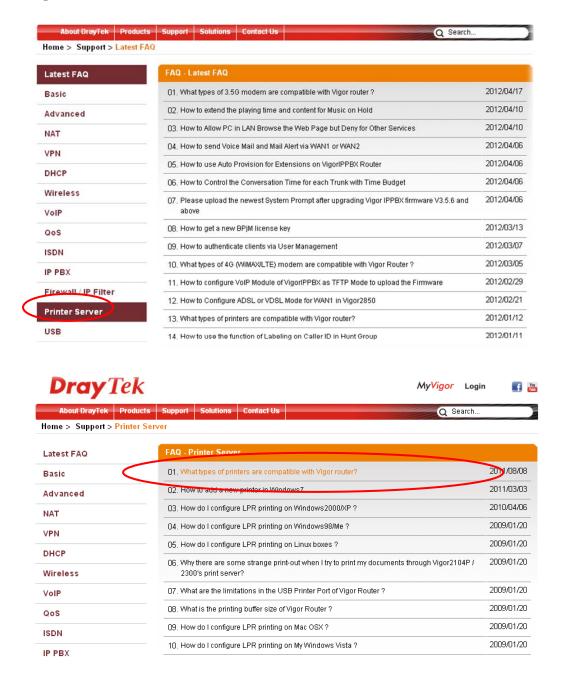


11. Select "LPR" on Protocol, type **p1** (number 1) as Queue Name. Then click **OK**. Next please refer to the red rectangle for choosing the correct protocol and LPR name.



The printer can be used for printing now. Most of the printers with different manufacturers are compatible with vigor router.

Note 1: Some printers with the fax/scanning or other additional functions are not supported. If you do not know whether your printer is supported or not, please visit www.draytek.com to find out the printer list. Open **Support** >>**FAQ**; find out the link of **Printer Server** and click it; then click the **What types of printers are compatible with Vigor router?** link.



Note 2: Vigor router supports printing request from computers via LAN ports but not DSL port.

3. Configuring Web Pages

To access Internet, please finish basic configuration after completing the hardware installation.

3.1 Accessing Web Page

1. Make sure your PC connects to the router correctly.



Notice: You may either simply set up your computer to get IP dynamically from the router or set up the IP address of the computer to be the same subnet as **the default IP address of Vigor router 192.168.1.1**. For the detailed information, please refer to the later section - Trouble Shooting of the guide.

- 2. Open a web browser on your PC and type http://192.168.1.1.
- 3. The following window will be open to ask for username and password. Please type "admin/admin" on Username/Password and click **Login** for opening the web configurator.





Notice: If you fail to access to the web configuration, please go to "Trouble Shooting" for detecting and solving your problem.

3.2 Basic Configuration

The **Quick Start Wizard** is designed for you to easily set up your router for Internet access. You can directly access the **Quick Start Wizard** via Web user interface.

1. Open the web user interface of Vigor router. The **Main Screen** will appear.

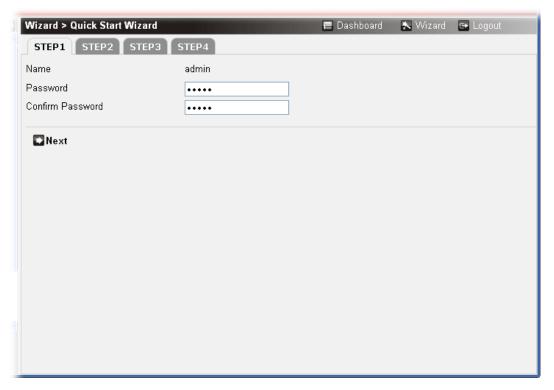


The home page will change slightly in accordance with the router you have. Here we take Vigor2760n as an example.

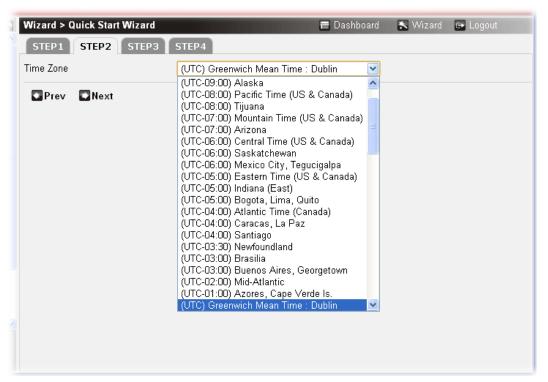
2. Click Wizard >>Quick Start Wizard.



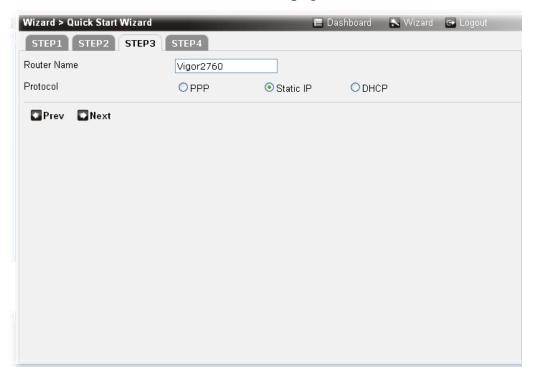
3. In the tab of **STEP1**, type the login password on the field of **Password** and retype it on the field of **Confirm Password**. After restarting the router, new password must be typed for accessing into router web page. Then, click the **Next** button for next page.



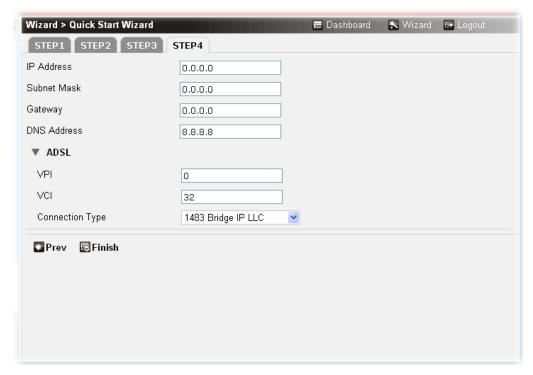
4. In the tab of **STEP2**, choose the time zone for the router located. Then, click the **Next** button for next page.



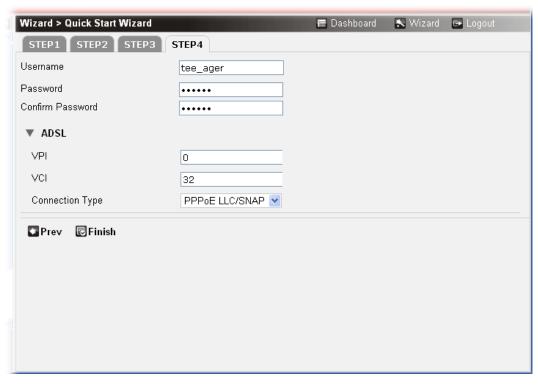
5. Type the router name and choose the protocol (PPP, Static IP or DHCP) according to the information from your ISP. For example, you should select PPP mode if the ISP provides you PPP interface. Then, click the **Next** button or the **STEP4** tab for next page.



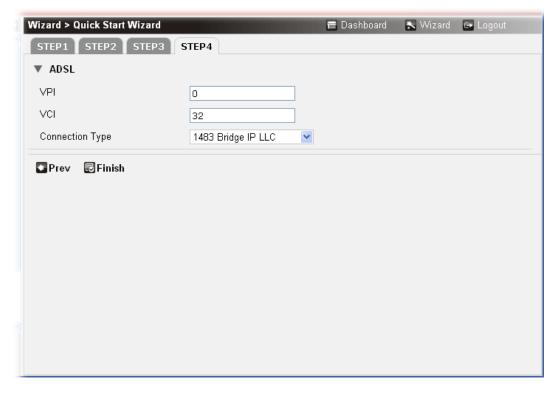
Static IP: if you click Static IP, you will get the following page. Please type in the IP address information and type the values for ADSL settings (it can be ignored if VDSL service is offered) originally provided by your ISP. Then click **Finish** to complete the configuration.



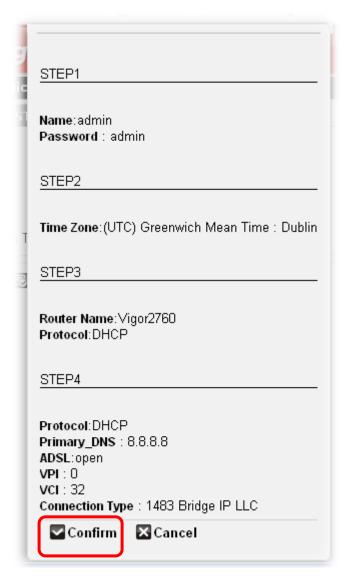
PPP: if you click PPP as the protocol, please manually type the Username/Password and type the values for ADSL settings (it can be ignored if VDSL service is offered) provided by your ISP. Then click **Finish** to complete the configuration.



DHCP: if you click DHCP as the protocol, just enter the values for ADSL settings (it can be ignored if VDSL service is offered) provided by your ISP. Then click **Finish** to complete the configuration.



6. When you click **Finish** to complete the configuration, the system will display a summary screen for you to confirm. Simply click **Confirm**. Later, the Dashboard screen will appear. You can enjoy surfing on the Internet.

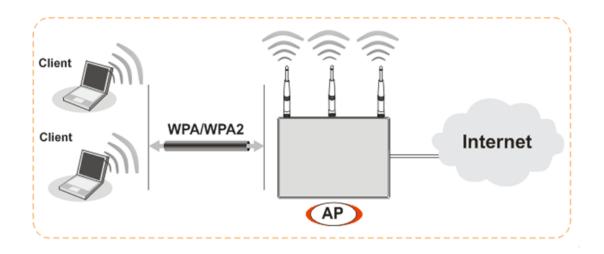


3.3 Wireless LAN Configuration

For operating Vigor2760n/Vn well, it is necessary for you to set the wireless LAN settings for using wireless function. Please read the following section carefully for configuring the settings for this router.

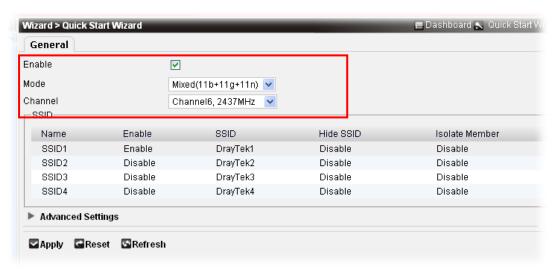
(The default value of Frequency Domain was set by factory depends on the reselling region.)

In an Infrastructure Mode of wireless network, Vigor wireless router plays a role as an **Access Point** (**AP**) connecting to lots of wireless clients or Stations (STA). All the STAs (clients) will share the same Internet connection with other wired hosts via Vigor wireless router.



3.3.1 General Setup

1. On the **Wireless LAN** group, select **General Setup**. The following page will be shown as below.



- 2. Check **Enable** to enable the wireless function.
- 3. At present, the router can connect to 11g Only, 11n Only, Mixed (11b+11g), and Mixed (11b+11g+11n) stations simultaneously. Simply choose Mix (11b+11g+11n) mode.
- 4. The default channel is 6. You can change it to an appropriate one if the selected channel is under serious interference.
- 5. The default names for SSID1 SSID4 are **DrayTek1 DrayTek4**. We suggest you change it to a particular name for your necessity. Simply click any SSID item under the SSID field. A pop up dialog will appear for you to modify the settings.
- 6. Click **Apply** to save the changes.

This page is left blank.

4. Trouble Shooting

This section will guide you to solve abnormal situations if you cannot access into the Internet after installing the router and finishing the web configuration. Please follow sections below to check your basic installation status stage by stage.

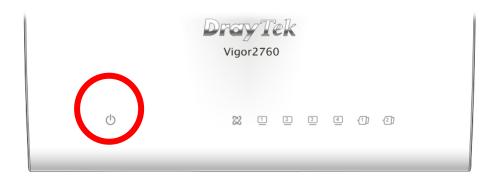
- Checking if the hardware status is OK or not.
- Checking if the network connection settings on your computer are OK or not.
- Pinging the router from your computer.
- ➤ Checking if the ISP settings are OK or not.
- ➤ Backing to factory default setting if necessary.

If all above stages are done and the router still cannot run normally, it is the time for you to contact your dealer for advanced help.

4.1 Checking If the Hardware Status Is OK or Not

Follow the steps below to verify the hardware status.

- 1. Check the power line and LAN cable connections. Refer to "2.1 Hardware Installation" for details.
- 2. Turn on the router. Make sure the **ACT LED** blink once per second and the correspondent **LAN LED** is bright.



3. If not, it means that there is something wrong with the hardware status. Simply back to "2.1 Hardware Installation" to execute the hardware installation again. And then, try again.

4.2 Checking If the Network Connection Settings on Your Computer Is OK or Not

Sometimes the link failure occurs due to the wrong network connection settings. After trying the above section, if the link is stilled failed, please do the steps listed below to make sure the network connection settings is OK.

For Windows



The example is based on Windows XP. As to the examples for other operation systems, please refer to the similar steps or find support notes in **www.draytek.com**.

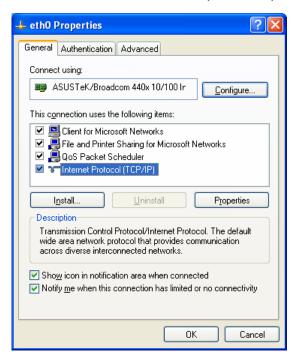
Go to Control Panel and then double-click on Network Connections.



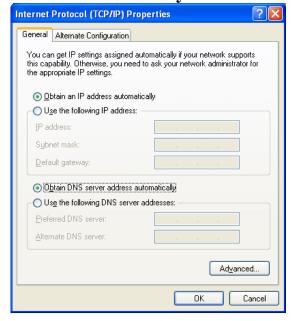
2. Right-click on Local Area Connection and click on Properties.



3. Select Internet Protocol (TCP/IP) and then click Properties.

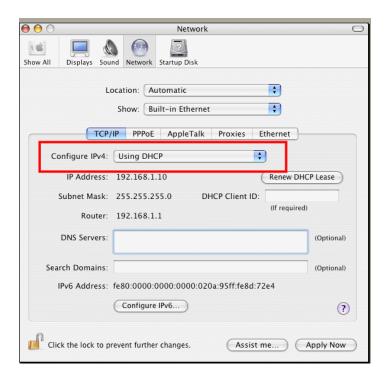


4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



For Mac OS

- 1. Double click on the current used Mac OS on the desktop.
- 2. Open the **Application** folder and get into **Network**.
- 3. On the **Network** screen, select **Using DHCP** from the drop down list of Configure IPv4.



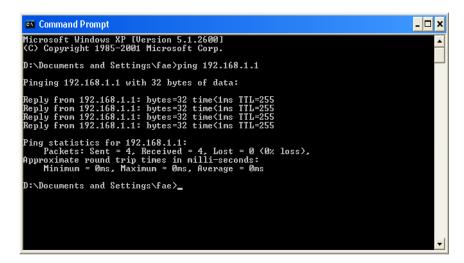
4.3 Pinging the Router from Your Computer

The default gateway IP address of the router is 192.168.1.1. For some reason, you might need to use "ping" command to check the link status of the router. **The most important thing is that the computer will receive a reply from 192.168.1.1.** If not, please check the IP address of your computer. We suggest you setting the network connection as **get IP automatically**. (Please refer to the section 4.2)

Please follow the steps below to ping the router correctly.

For Windows

- 1. Open the **Command** Prompt window (from **Start menu> Run**).
- 2. Type **command** (for Windows 95/98/ME) or **cmd** (for Windows NT/ 2000/XP/Vista). The DOS command dialog will appear.



- 3. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of "**Reply from 192.168.1.1:bytes=32 time<1ms TTL=255**" will appear.
- 4. If the line does not appear, please check the IP address setting of your computer.

For Mac OS (Terminal)

- 1. Double click on the current used Mac OS on the desktop.
- 2. Open the **Application** folder and get into **Utilities**.
- 3. Double click **Terminal**. The Terminal window will appear.
- 4. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of "64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=xxxx ms" will appear.

```
\Theta \Theta \Theta
                           Terminal - bash - 80x24
                                                                                  9
Last login: Sat Jan 3 02:24:18 on ttyp1
Welcome to Darwin!
Vigor10:~ draytek$ ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1): 56 data bytes
64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=0.755 ms
64 bytes from 192.168.1.1: icmp_seq=1 ttl=255 time=0.697 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=255 time=0.716 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=255 time=0.731 ms
64 bytes from 192.168.1.1: icmp_seq=4 ttl=255 time=0.72 ms
--- 192.168.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 0.697/0.723/0.755 ms
Vigor10:~ draytek$
```

4.4 Checking If the ISP Settings are OK or Not

Open **Network>>WAN** and check whether the ISP settings are set correctly.



4.5 Backing to Factory Default Setting If Necessary

Sometimes, a wrong connection can be improved by returning to the default settings. Try to reset the router by software or hardware.



Warning: After pressing **factory default setting**, you will loose all settings you did before. Make sure you have recorded all useful settings before you pressing.

Software Reset

You can reset the router to factory default via Web page.

Open **System Maintenance**>> **Reboot System**. The following screen will appear. Choose **Using factory default configuration** and click **OK**. After few seconds, the router will return all the settings to the factory settings.



Hardware Reset

While the router is running (ACT LED blinking), press the **Factory Reset** button and hold for more than 5 seconds. When you see the **ACT** LED blinks rapidly, please release the button. Then, the router will restart with the default configuration.



After restore the factory default setting, you can configure the settings for the router again to fit your personal request.

4.6 Contacting Your Dealer

If the router still cannot work correctly after trying many efforts, please contact your dealer for further help right away. For any questions, please feel free to send e-mail to support@draytek.com.